

**X RUSH**  
**09/858,012**

The locations for the amendments to the specification filed April 3, 2006 are as follows:

Amendment 1.

Page 19, insert the change between lines 18 and 19.

Amendment 2.

Page 26, make the noted change on line 6.

Amendment 3.

Page 51, insert the change between lines 13 and 14.

Amendment 4.

Page 52, insert the change between lines 14 and 15.

Amendment 5.

Page 52, insert the noted change after line 24.

Amendment 6.

Page 53, insert the noted change in line 3.

Amendment 7.

Page 53, make the noted change to line 21.

Amendment 8.

Page 60, insert the noted change between lines 10 and 11.

Amendment 9.

Page 73, insert the noted change between lines 25 and 26.

Amendment 10.

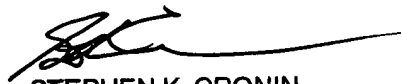
Page 106, insert the noted change between lines 6 and 7.

Amendment 11.

Page 120, insert the noted change between lines 14 and 15.

Also, the examiner has included the relevant pages of the specification with the specific location of each change noted.

It is also noted that the locations given by applicant are directed to the numbered paragraphs set forth in the published application 2002/0043544 A1 of this currently pending application.



STEPHEN K. CRONIN  
SUPERVISORY PATENT EXAMINER

Figs. 32-I is a fragmentary perspective view of a "linked" strap adaptor using a wheeled connecting means inside a grooved flexible member .

Figs. 32-JA and 32-JA' are fragmentary front views of the loaded carrier in Figs. 32-A and 32-B respectively with the pad wrap adaptor having a slidable ring positioned on the part of the shoulder strap closest to the main frame.

Fig. 32-JB and 32-JB' are fragmentary front views of the loaded carrier in Fig. 32-A and 32-B respectively with the pad wrap adaptor positioned a certain distance from the top of the shoulder straps.

Figs. 32-JC, 32-JC', 32-JD, 32-JD' are fragmentary front views similar to Figs. 32-JA, 32-JA', 32-JB, and 32-JB' using a pad adaptor having a fixed attachment point.

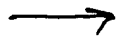
Figs. 32-JE and 32-JE' are fragmentary front views of the loaded pack carrier utilizing the alternate smaller-sized coils mounted outside the main frame.

Figs. 32-K and 32-L are fragmentary perspective views of an accordion-like collapsible outer layer in the extended position.

Figs. 32-K' and 32-L' are fragmentary perspective views of an accordion-like collapsible outer layer in the retracted position.

Figs. 32-M and 32-M' are perspective views of a collapsible outer layer made up of concentric tubes with tapering cross-sections in the extended and retracted positions respectively.

①



Figs. 33-A and 33-B are perspective views of one type of pack carrier I mounted on a bike in the upright and folded positions respectively.

Fig. 54-X is a fragmentary perspective view of yet another type of recumbent bike.

Fig. 54-A is a perspective view of one type of pack carrier for the type of recumbent bike in Fig. 54-X.

Figs. 55-A, 55-A', 55-B, and 55-B' are perspective views of the possible pack carriers for a recumbent bike having a seat with no transverse bar during and after assembly.

② → Figs. 55-C and 55-C' are perspective views of the pack carriers in Figs. 55-A' and 55-B' adapted to a recumbent bike already having a top transverse bar.

IC? →  
Fig. 56-A is a fragmentary internal perspective view of the semi-self adjusting platform base for a pack carrier.

Figs. 56-B and 56-C are exploded perspective views of the assembly of components of the platform base in Fig. 56-A.

Figs. 56-D1 through 56-D7 are fragmentary and internal top views of the platform base without the top plate 1012-2 for the front and back sections, showing the operation of the adjusting mechanism.

Figs. 56-E and 56-E' are internal top views of the platform base without the top plate 1012-2 in the retracted and fully expanded positions respectively.

Figs. 57-A, 57-A' and 57-C are exploded perspective views of the assembly of components of the platform base in Fig. 57-B.

Fig. 57-B is a perspective internal view of the assembled front section of the manually adjustable platform I.

with a catch 290. Catch 290 comprise of a flexible member with a tapered front 290-1, a midsection that has a latching surface 290-2, and a stem 290-3 of width no bigger than the distance between the pair of bumpers 289. Catch 290 contracts as it is urged into the section between the pair of bumpers 289 and then goes back to its original size right after the latching surface clears the end of said bumpers. To unlatch, bumpers 289 are lifted up together with the handle assembly thereby releasing button 54-1. The process is shown in Figs. 8-B1 thru 8-B4.

Referring to Fig. 8-C, a third alternative is a pair of narrower, flexible longitudinally mounted bumpers 294 on cap 64''. Catch 292 becomes a rigid member with a tapered front 292-1, a midsection that has a latching surface 292-2, and a stem 292-3 of width no bigger than the distance between the pair of bumpers 294. Bumpers 294 flex sideways as rigid catch 292 is urged into the section between them. They go back to its original position right after the latching surface 292-2 of catch 292 clears them. To unlatch, bumpers 294 are lifted up together with the handle assembly thereby releasing button 54-1. The process is shown in Figs. 8-C1 thru 8-C4.

### **B. Installing the Padded Back Support**

Referring to Figs. 23-A and 23-C, the one-piece cushioning envelopes 162 or 159 the two-piece support 164 is slipped down over the upright components of the carrier until its bottom front edge rests on the corners where the horizontal and upright components meet.

### **C. Attachment of Backpack to the Carrier**

The backpack is laid onto the horizontal base components. Referring to Figs. 15 and 17, the front transverse bar 85-3 of raised front base 85 is pushed forward by the lower front face of the backpack. Referring also to Figs. 9-A and 9-B. Consequently, the smaller tubes 78R and 78L telescope out of tubes 80R and 80L respectively. The extent of expansion is just enough to accommodate the extra depth of the backpack. The adaptability of the spring, cord, or equivalent elastic member disposed inside tubes 78R and 80R makes this happen. Fig. 9-B illustrates the sectional view of the relevant portions of the base when the maximum expansion possible is reached. Front retaining cap 80-0 on tube 80R come together with rear retaining cap 80-2 to prevent tube 78R from leaving tube 80R. Because the raised transverse bar 85-3 and the front legs are all parts of one front base, they move together in the same direction. Therefore, the location of the front

legs relative to the outer edge of the backpack is maintained. This prevents the pack and carrier from tipping over.

Referring to Fig. 16-A where the gripping means shown can be that of any knob assemblies, 87, 89, 91-A, 91-B, the user is preferably positioned behind the backpack. The rotating knob is loosened either by turning counter-clockwise for assemblies 87 and 89 or by lifting for assemblies 91-A and 91-B to allow their respective knob housings to rotate along the longitudinal axis of transverse bar 90. The knob housing is brought as close as possible to the backpack handle strap 124. Strap 124 is wound as many times as necessary around the neck of the housing before the housing is rotated back up to its desired final position. The operating details were presented earlier with each of the gripping means.

Referring to Fig. 16-B where the gripping means is that of a ratchet grip assembly, the user is preferably positioned in front of the backpack. The handle strap 124 is latched onto catch 95 from behind. The handle bar 94-0 is rotated forward and the backward several times as is necessary to tighten the grip on the handle strap.

④ → Referring to Figs, 13-A, 13-B1 thru B3, and 19, each of the lower unpadded ends of the backpack straps are disconnected from the padded upper portion and knotted to form a lump or obstruction 130 big enough to prevent the strap from going through the slinging hook 122. A small ring or bead may also be added in the knot to provide a bigger and more secure obstruction. Then each of the lower ends of the straps is slung onto their respective hooks 122. With the strap lump 130 positioned on the side of hook 122 that is opposite the backpack, the strap is entered beneath the outward extension 122-3. An upward pull of the strap urges the inward extension 122-2 to move outward slightly and allow the strap to go through until it reaches the midsection 122-0 where it stays in place. The unpadded ends are then reconnected with their respective padded upper ends of the backpack strap via buckles or snap fasteners that already come with the straps.

⑤ → Referring to Fig. 18, if hooks 122 are installed in the inner side of the base, the knotted straps can be slung and unslung onto hooks 122 without having to be separated first from the upper padded ones. This is particularly advantageous especially when used in conjunction with the two-piece slim pack support pads 164 shown in Fig 23. It allows the backpack to be detached from the carrier within a very short time. Referring to Fig. 19, if the hooks 122 are installed on the outer side of the base, it would be desirable for the lower unpadded strap and the upper padded strap to be

connected and reconnected by snap fasteners or release buckles to save time. Some backpacks come already equipped with these time saving fasteners. Several other types of fasteners may be mounted in place of hook 122. It is preferable that they all secure the backpack on its rear corners just using the strap itself without the addition of an adaptor or the like.

#### D. Operation of Handle Assembly

Handle bar 68 is pulled up. Positioning members 66-3 of snap buttons 66-1 in tubes 66R and 66L engage into their respective terminal cavities 60-0 in tubes 60R and 60L. Tubes 60R and 60L are drawn out of tubes 54R and 54L respectively. Positioning members 60-3 of snap buttons 60-1 in tubes 60R and 60L engages onto guide notches 58-4R and 58-4L of tubes 54R and 54L respectively. The top retaining caps 58R and 58L meet with their respective bottom retaining caps 56L' and 56R'. Top retaining caps 62R and 62L meet with their respective bottom retaining caps 70. The vertical components are tilted back and pulled. The pack carrier rolls on the ground on its rear wheels or casters.

To retract, handle bar 68 is pushed down. Positioning members 60-3 are urged back into tubes 60R and 60L by guide notches 58-4R and 58-4L respectively. Tubes 60R and 60L retract terminally into tubes 54R and 54L respectively after which positioning members 66-3 of snap buttons 66-1 begin to retract into tube 66R and 66L just from the downward force further applied to the handle bar. At this point, tubes 66R and 66L start to retract into tube 60R and 60L respectively until resistance from caps 58R and 58L or from the rotating assembly components is encountered by the handle bar 68.

#### 7 Quasi-Permanent Height-Adjustable Handle Bar I

A fourth pair of tubes may be added to the handle assembly that can be extended quasi-permanently. The same quasi-permanent extension can be adapted to a two or three-pair tube assembly. Referring to Figs. 7-A and 14-D, tube 72R is dimensionally receivable inside tube 60R. It has apertures 72-0, 72-1, 72-2, and 72-3 disposed along its side facing tube 72L. It also has apertures 70-2 on the front and back toward its lower end and a notch 72-4 on its upper end facing 72L. A control rod 74 is dimensionally receivable inside tube 72R. It has a switch arm 74-4 extending outwardly. It also has a drilled aperture 74-0 near its upper end and another drilled

The new top retaining cap will be the similar to cap 81 except for the presence of more markers indicating the positions of the height-defining apertures below.

Assembly is basically the same as that for the adjustable handle bar II variation.

### Adjustable Handle Bar I Variation

Finally, a variation of the adjustable handle bar I is also possible wherein the control rod is permanently connected to the handle bar, obviating the need for a switch arm on the control rod and for a window on the handle bar.

### Seat and Backrest Option

The pack carrier can be tilted or inclined forward and used as a backrest in conjunction with a seat mounted and retained behind the main frame.

Referring to Fig. 23-A, a seat 160 comprises of a polyethylene sheet or any thin pad just slightly smaller than cushioning envelope 162. Close to each of its top corners is an aperture 160-0 big enough for a cord 160-2 to go through. The seat is mounted onto the main frame by simply tying the cord 160-2 loosely on the lower section of the main frame tubes. When not being used, the seat is concealed inside the loop of the cushioning envelope 162. In addition to a loose tie mounting, the seat may also have slots on its top and bottom sections to facilitate its being pulled in and out of the cushioning envelope after and before use. One can use an extra length of cord when mounting the seat if he or she prefers to have the seat farther out during use.

Referring to Fig. 23-B, the seat 161 may comprise of a double-layered pad that is folded and unfolded as shown to protect the user's clothes from the dirty face of the seat when the pack carrier is used in the backpack mode. The double-layered pad 161 may be an integral part of the cushioning envelope as well.

Referring to Figs. 20-C and 20-C', the front legs of the basic pack carrier are shaped to allow rocking motion when the handle assembly is tilted forward. The fixed connection between the main frame and the base can be reinforced for added strength.

Referring to Fig. 20-D, the same idea can be applied to a carrier that does not have an extendible base.

protrusions each extending transversely from the main spring body. Next to the stopper 224-4 is a closure-side guide 224-6 which, is just an extension of the flat spring 224. Stopper 224-8 consists of two pairs of protrusions separated by an extension of the flat spring 224 called the hinge-side guide 224-7.

Assembly of clamp grip IV is as follows:

1. Referring to Fig. 31-C, hinge housing 204-0 and closure 207 are mounted onto their respective positions on the underside of transverse bar 225.
2. Hinge-side guide 224-7 is pushed between hinge legs 204-1.
3. Closure-side guide 224-6 is pushed between the springy legs of closure 207.
4. Trough 224-3 of spring 224 is mounted on the transverse bar 225 with a screw.
5. Clamp mate 205' is mounted onto hinge housing 204-0 with hinge pin 204-4.

Operation of clamp grip IV is the same as that for clamp grip II. The single flat-type spring does the job of the helical spring and clamp in clamp grip II. Stoppers 224-4 and 224-8 retain the flat spring within the clamp grip assembly. The guides help to keep the flat spring aligned with the clamp mate as its ends move in response to the pressure applied on it by the backpack strap.

Still another variation would be the use of a pair of smaller-sized clamp units, one for each padded strap. The flat spring may consist of only one wave. Furthermore, these smaller units may be movable along the underside of the transverse bar and then temporarily fixed so as to adjust to the location of padded straps that could be mounted so far apart on a backpack. One such variation using clamp grip IV is shown in Fig. 31-D. The underside of a hollow transverse bar 230 is equipped with a pair of mini clamp grips 228 that is slidable inside said transverse bar and supported by runners 230-2. Bar 230 also has a plurality of apertures along its side that comes in contact with buttons 227 on the clamp grips. A plunger button 227 is disposed on a side of base 228-0 of grip 228. The positions of the clamps are temporarily fixed when the snap buttons engage into the apertures.

⑨ →

#### **Description of Strap Lifting Apparatus**

Referring to Figs. 32-A thru 32-E', the apparatus comprise of a pair of low resisting extension springs 278, a pair of top spring holders 277, a pair of bottom spring holders 276, a pair of strap adaptors 280 or 282, and two pieces of string connectors 284.

The carrier shown in Figs. 55-B and B' can be adapted to a frame that already has a top transverse bar as shown in Figs. 55-C and C'.

### Alternate Semi-Self-adjusting Platform for Pack Carriers

Only one type of self-adjusting platform has been presented so far. Referring to Figs. 9-A and 9-B, expansion and contraction are accomplished by the use of springs or heavy-duty elastics mounted inside telescoping tubes.

⑩ → An alternative to this method is presented in Figs. 56-A thru 56-E'. This semi-self-adjusting type lends itself well to a plate platform although it can be adapted to look like a tube platform as well by hollowing out its center. It is only semi-self-adjusting because, one still has to push or pull a control member to activate or deactivate its adjusting mechanism.

Referring to Figs. 56-A, 56-B, and 56-C the semi-self-adjusting plate platform basically comprise of a front platform extension 1010 that can extend out of a larger rear platform 1012. A pair of button heads 1010-40 slip in and out of one in several in a row of wave-like indentations 1012-01 as the raised front member 1010-04 is urged out by the backpack. At the desired position, the button heads 1010-40 are trapped into the indentation they are in by a control member 1010-2, thus preventing further movement by the front platform extension 1010.

A front member base 1010-0 comprise of a plate flanked in front by a raised front member 1010-04 with a center opening 1010-03 and the pack carrier's two front legs 1010-06. The protrusions 1010-02 on top of the plate serve as guides or retainers for the control member 1010-2 and flexible button 1010-4. There are also retainers 1010-01 disposed on the underside.

Control member 1010-2 comprises of a thin plate with a button contact extension 1010-22 and an on/off extension 1010-24 on each side and a finger button 1010-20 in front.

Twin flexible button 1010-4 comprises of a slim plate terminating transversely with button neck 1010-42 on each end. Along neck 1010-42 are on/off protrusions 1010-44, button contact protrusion 1010-46, and finally the button head 1010-40 itself.

Front member top plate 1010-6 is a plain plate with a bottom protrusion 1010-60 and several holes for screws.

Rear platform 1012 comprises of a rear member base 1012-0 and rear member top plate 1012-2. Rear base 1012-0 is a plate flanked at the rear with the two rear legs of the pack carrier and

The main frames and extendible bases presented are independently novel, unique, and effective and can therefore be adapted together or separately to improve flexibility and performance of main frames and/or supporting bases of other pack carriers and wheeled backpacks introduced in the prior art.

Also, for example, my illustrations embody a fourth pair of tubes to illustrate the operation of the quasi-permanent height-adjustable telescoping handle assembly. The same idea can be applied to any assembly having at least one column made up of at least a pair of telescoping tubes.

Also, for example, the top retaining caps in the illustrations anticipate the use of the strap-lifting accessory and the front support members are terminated with ball bearings, however, these should not be construed as a limitation in scope.

Also, for example, more support members may be added to the proximal end of the underside of the back section of the base to provide extra support especially for very deep bases.

Also, the main frame for pack carriers on bike can be mounted by some means to either side of the bike wheels, one for each side if desired.

For example, a unique bracket 901 was introduced for use in retaining main frames of bike pack carriers in the upright position. This bracket can also find application in temporarily connecting side by side any pair of tubular members at a specific angle relative to each other.

Most importantly, my carriers are all founded on the idea that most packs can be secured at a set of strategic points where attachment means can be affixed. One set of these strategic points comprise a point proximal the juncture between the topside of the pack and the face of the pack against the main frame and points proximal the rear bottom corners of the pack. With the most popular type of luggage carrier, the backpack, no supplemental straps are necessary. The handle and shoulder straps are sufficient. To reiterate, a carrier can be made that will have retaining means that can approximate the location of existing sets of strategic attachment points on various packs. Because various other types of packs can be affixed with supplemental attachment means that can also approximate an existing set of retaining means on a pack carrier, a very wide range of securing possibilities can be realized, thereby, providing a customized carrier for most needs at very little cost.

Accordingly, the scope of the invention should be determined by the appended claims and their legal equivalents.